ELOS

System Marine

Complete Reef System

USER MANUAL

www. eloseurope.com

PREFACE

Congratulations on your purchase of the **Elos System**.

The uniquely colorful and diverse underwater world of the coral reef and its inhabitants has captivated man for ages. Since the early years, aquatic hobbyists have tried to duplicate this wonderland in their homes, focusing on the equipment and technologies required to achieve this.

Elos developed the **System LINE Aquariums** to provide a complete reef-ready system so that from the beginning, you can focus on the aquarium's inhabitants rather than the hardware.

All our aquariums have been developed with all the knowledge we have developed in years of experience. They are a fully working aquarium and, more sophisticated than any other aquarium actually available on the market. They incorporate our Skimming technology and, as an optional (in some model light is also included) a full range of innovative LED lights, unsurpassed in term of innovation, low energy consumption and quality.

This manual includes complete set-up and operational instructions for the **System Line** aquarium.

We hope that you enjoy your **ELOS System**.

PLEASE READ AND FOLLOW ALL SAFETY INSTRUCTIONS

DANGER: To avoid possible electric shock, special care should be taken when handling a wet aquarium. For each of the following situations, do not attempt repairs yourself; return the appliance to an authorized service facility for service or discard the appliance.

WARNING: To guard against injury, basic safety precautions should be observed, including the following:

a. Do not operate any appliance if it has a damaged cord or plug, if it is malfunctioning, or if it is dropped or damaged in any manner.

b. To avoid the possibility of the appliance plug or receptacle getting wet, position the aquarium stand and tank to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. You should create a "drip loop" (see Figure 1) for each cord connecting an aquarium appliance to a receptacle. The "drip loop" is that part of the cord below the level of the receptacle, or the connector. Use an extension cord, if necessary, to prevent water traveling along the cord and coming into contact with the receptacle. If the plug or receptacle does get wet, DO NOT unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then unplug the device and examine for presence of water in the receptacle.

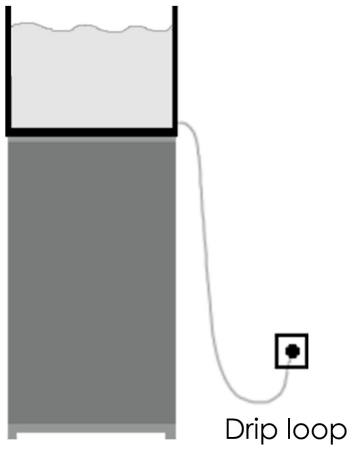


Fig. 1

c. Close supervision is necessary when any appliance is used by or near children.

d. To avoid injury, do not contact moving parts.

e. Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never pull the cord itself to remove the plug from the outlet. Grasp the plug and pull to disconnect.

f. Do not use an appliance for anything other than its intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.

g. Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing point.

h. Make sure an appliance mounted on a tank is securely installed before operating it.

i. Read and observe all the important notices on the appliance.

j. If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it cannot be tripped over or pulled accidentally.

SET-UP

The ELOS System aquarium comprises the following:

1. Tank with plumbing
2. Cabinet
3. External Filter (SUMP)
4. Protein skimmer
5. Level controller (optional on some models)
5. Circulation and skimmer pumps
6. Illumination with power cord and transformer (optional on some models)
7. Mechanical filter bag

Location
The first step in setting up the ELOS System is to choose a suitable location. The location should be decided upon in advance because, once filled with substrate, rocks and water, the aquarium must not be moved. Consider the following parameters when choosing the location.

Tank weight and support
The tank weighs is considerable, expecially when filled with water, reef base and live rock. If you choose not to use the System Line cabinet (Elos SQUARE), consider this weight when selecting an alternative aquarium support or stand. If the support you choose is not designed specifically as an aquarium stand, ensure that it can both withstand the weight and that it remains balanced and level; it should also be constructed from a material that is splash proof. The ELOS System Aquarium, like all glass aquaria, may crack if subjected to sudden movement as a result of uneven water pressure on the glass walls.

Accessibility
When choosing a location, ensure that you have enough room to open the cabinet's door(s) and remove the skimmer collection cup for regular maintenance. Make sure you can reach the power plug on the wall and that the power plugs can be removed. Ensure that the area surrounding the aquarium is waterproof and consider moving away anything that water might damage.

Room temperature
Site selection is important for correct temperature maintenance. We recommended that you keep the ambient room temperature a comfortable and stable 22°C / 72°F. Avoid placing the tank in front of an air conditioner, heating vents or direct sunlight. A well ventilated room with moderate light is the best place to position the aquarium.

NOTE
If you plan to use a water chiller, ensure that there is least 10 cm / 4" of clearance behind the System Line Aquarium to allow for sufficient air circulation.

UNPACKING THE AQUARIUM

Please read this section carefully before proceeding. In some models the filter is positioned inside the aquarium; if this is the case with your aquarium, in order to avoid damages, two people are required to unpack it.

To unpack the aquarium

1. remove the protective packaging from around and the top of the aquarium.
2. remove the skimmer box from inside the aquarium and unpack the skimmer.
3. prepare the connection kit and the Osmo Controller (where included).
4. in case the filter is positioned inside the aquarium, with one person positioned at either side of the tank, grasp the filter and lift it gently out of the tank and onto a flat surface. Pay attention not to touch the aquarium with the filter. This may scratch the aquarium's glass.
5. proceed with the assembly:

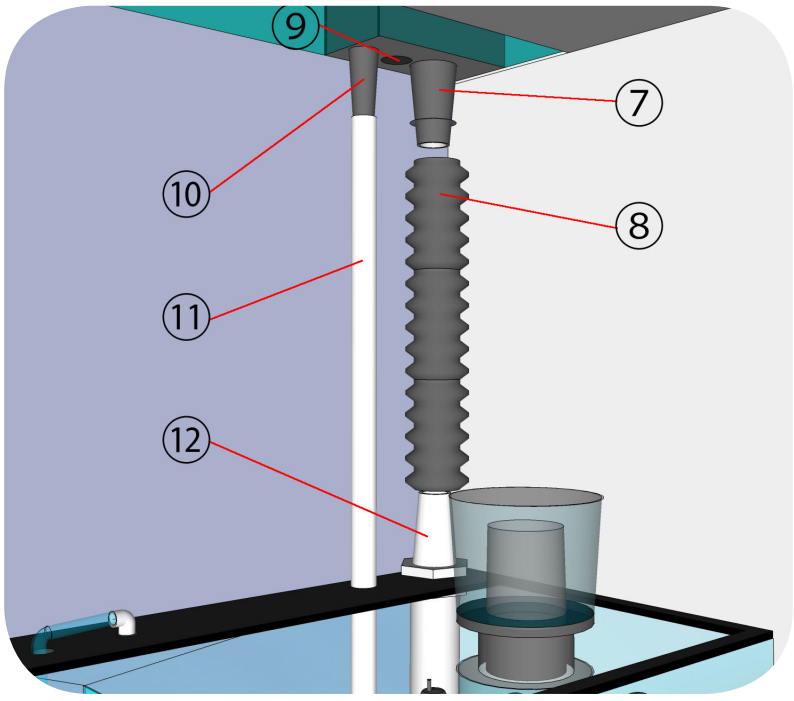
ASSEMBLY

Remove the cabinet from its carton and assembly it following the supplied instructions. Shall you find difficulty in understanding the assembly procedure, on YouTube it is available a full descriptive video that clearly shows how to assemble an ELOS CABINET. (just search on Youtube the words: ELOS SQUARE)

Directlink: http://www.youtube.com/watch?v=hZo6BkE7ybo

Aquarium preparation

1. When the unit arrives it is likely that some of the smaller parts and pipes have been packed in a partially disassembled state to prevent damage in transit. Study the diagrams overleaf to reassemble.
2. With the help of one person, place the aquarium on its cabinet, in a way so that you can easily access the connections placed on the bottom of the overflow (see drawing).
3. Tank Connector - when fitting the tank connectors (7-10) at the bottom of the overflow box please be sure to fit the O-RING to ensure a good seal. (in some models instead a white teflon tape is supplied)



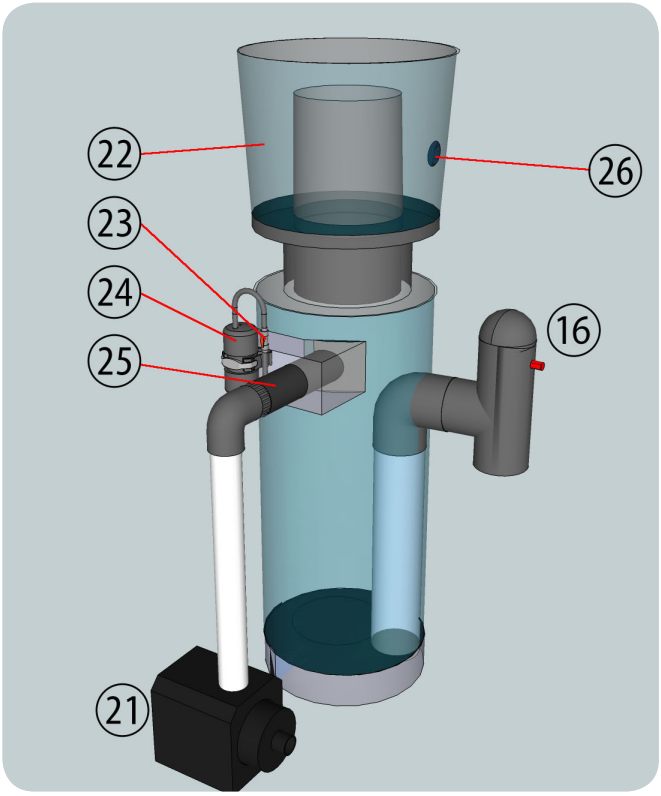
4. Connect the corrugated tube (8) to the outlet overflow tank connector (7) on the bottom of the aquarium and at the SUMP where you have previously connected the coupling connector (12) and the rigid pipe. Particolar attention should be taken to avoid water spilling.
3. Return plumbing: connect the silicon tube (11) to the inlet tank connector (10) on the bottom of the aquarium.

4. With the help of one person gently position the aquarium on the cabinet.

NEVER MOVE THE AQUARIUM WHEN FILLED WITH WATER. THIS WILL VOID THE WARRANTY.

5. Read the Skimmer and Filter Preparation Instructions.

Skimmer preparation



1. Elos skimmers are available in several models, with Venturi Injection or with Pin Wheel Impellor. They are sized to provide optimum cleaning efficiency.

The skimmer parts are removable and should be inspected so that you familiarise with their assembly:

(16) the outlet valve and the T plumbing: the top of the T plumbing can be rotated to modify the water level inside the skimmer.

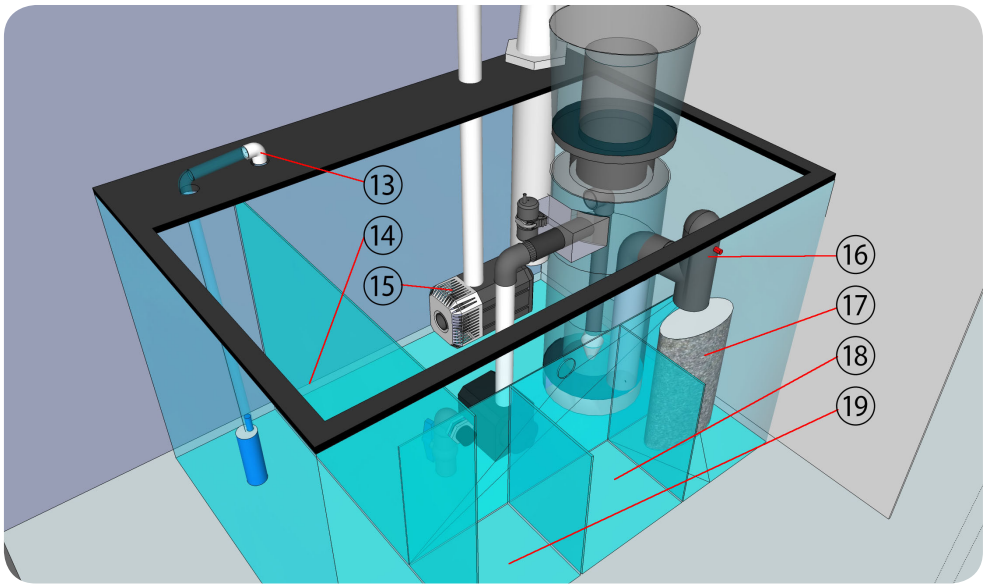
(22) the pot: clean it regularly.

(25) the Venturi injector (only on NS models): connect it to the pump (21) and to the inlet of the skimmer. On Pin Wheel skimmers (PS models) the injector is positioned on the pump.

(23) air clamp: to modify the air. Start with the clamp completely closed and regulate the air flow to your need.

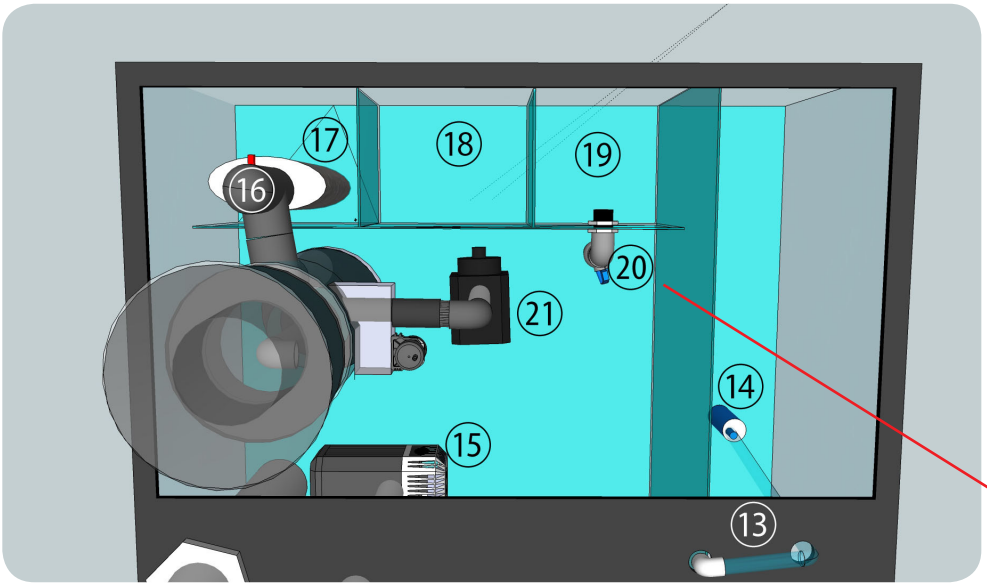
(24): silencer

(26): skimmer overflow: you can connect it to a canister to collect the waste.



Filter preparation

Position the skimmer inside the SUMP as shown on the picture. The exit from the T plumbing (16) should be directed to the filter bag (17).



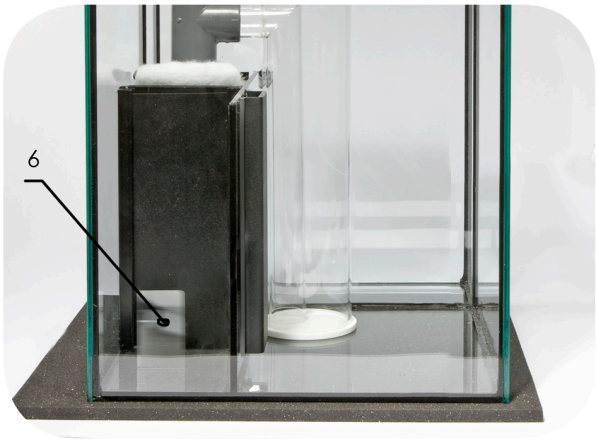
The filter bag (17) should be cleaned weekly. Spare part are available at your local ELOS dealer. In the oxidising chamber (18) the water flow is fast. You can position here **Elos Ca-Pur XL**. This is also the correct place for **Elos Carbon, Elos Filtra P, Elos Filtra P Fast**.

In the reducing chamber (19) the flow is slower and can be adjusted by opening/closing the tap (20). You can fill this chamber with **Elos Filtra 1 or Ca-Pur**.

In case your aquarium will be densely populated with fish, the tap should be kept completely open. Otherwise we suggest to reduce the flow to the minimum.

Note: never Close this tap completely to avoid anaerobic areas.

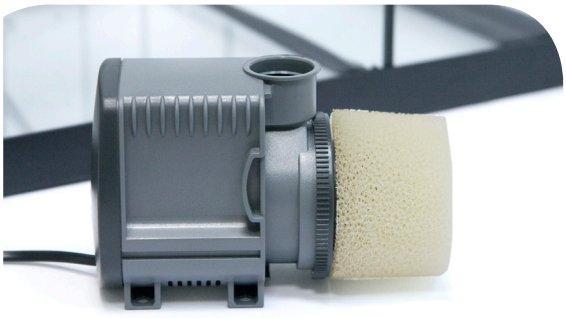
Also note the hole on the bottom of the removable plastic separator (6). It forces part of the water coming out from the skimmer, to the bottom of the filter material to create the correct water flow thus avoiding anaerobic areas.



You can reverse this to modify the water flow to your needs.

To avoid fine bubbles inside the aquarium on smaller models a sponge is supplied with the top up pump (see picture).

Position this sponge on the front of the top up pump to avoid fine bubbles inside the aquarium. You should position the outlet tube (corrugated) coming from the overflow away from the top up pump for the same reason.



NOTE: pumps transmit vibrations and noise to the SUMP. To reduce the noise use the supplied suction cups/plastic pins to fix the pumps. Position the pumps away from the side glass of the filter will also help reducing noise generated from vibrations.

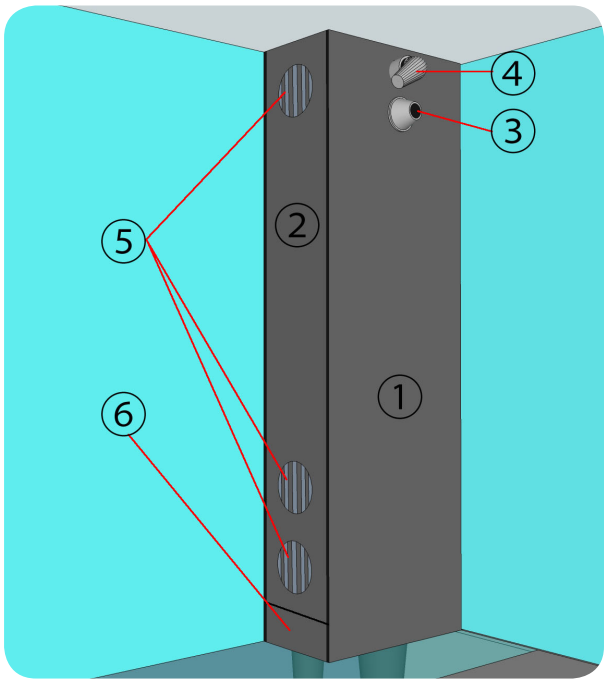
3. With the help of a person, gently move the filter into the cabinet, while positioning the return tube (silicon tube) coming from the overflow of the aquarium previously connected to the return pump. You will modify the water flow from the pump to your needs. The lower the flow, the lower will be the noise from the overflow.

Fresh Water Reservoir (14):

On the 'Standard System Aquarium' there is a section of the sump, which is separate from the main body of water. This is the fresh water reservoir, which is used to store water required for replacing evaporative losses from the aquarium. This reservoir is not present on some larger models due to the extra volume required in the sump.

To utilise this reservoir it will be necessary to install the **Elos OSMO Controller** (optional on some models), which will sense the drop in water level in the main sump and then pump water from the reservoir into the system. Use the supplied pipings for this reason (13).

The overflow (1):



Elos overflow is the smaller internal overflow available on the market. The actual model, although very simple, is the evolution of our first overflow introduced to the hobby in the eighties.

All our aquariums employes a similar overflow that includes a 90° directional tail (4), to create surface movement thus increasing oxigen exchange, a straight removable pipe (3) to create deeper water flow, a removable plate (2) with a surface grid and bottom grids (5).

A lower plate (6) is supplied to avoid the coral sand to block the sliding plate.

OPERATION

Filling the Aquarium with Water: once all of the pipeworks and parts have been assembled and installed you are ready to fill the aquarium with water.

Remove the cabinet doors, lids and any light units to give you good access prior to starting and store them in a safe place where they will not be knocked over.

Fill the aquarium with salt water until the level reaches the top of the overflow box. Further water added past this point will overflow down to the sump, which will also start to fill.

At this point check that there are no leaks at any of the pipe connections. If any are found then tighten up the threaded unions until they stop.

Continue to fill the tank until the water level, with the whole system stabilised, reaches a level 10-12cm (4") from the top of the pumps. The pumps are not running at this point. Mark this Maximum Fill Level with a piece of coloured tape.

If adding salt to RO water within the tank always allow 24 hours for proper mixing of the solution before the addition of any life forms and check that the salinity is correct through out the whole system.

Operation of Recirculation Pump and Skimmer: The System Aquarium is supplied with a circulation pump to create good water movement within the tank to simulate the natural flows on the reef.

Prior to starting up the Recirculation pump it is necessary to carry out the following steps.

1) Direct the directional tail (4) to the bottom of the aquarium, to avoid water from splashing out from the aquarium.

2) Be sure that the water level is above the pumps.

With the recirculation pump running observe the system and check for any pipework leaks. Tighten if necessary.

The water should rise in the aquarium and fall in the sump and at this stage there will be a gurgle as the water flows down the overflow box.

Slowly close the overflow shut-off valve (not available on all models) to reduce the gurgle.

It is also possible to reduce the water flow at the pump side.

During operation the resistance and subsequent flow rate through the overflow will change requiring occasional adjustment of the valve to maintain the correct overflow level.

Skimmer Pump: We can now plug in the Skimmer Pump. If the small grey tap (23) on the air line and the outlet valve (16) are both open, you will see that the skimmer body immediately fills up. Close off the air tap and observe that the foam disappears.

For all ELOS skimmers the ideal operating level for the water is just above the bottom of the removable cup. Adjust the water level by raising or lowering the adjustable outlet valve and the air flow.

Leave the skimmer to settle down for a day or so before further adjustment. Close down the tap slightly if an initial very wet skimmate is being produced this is normally produced by removal of a conditioning compound that is found in some salts. A similar effect may be noticed after a thorough clean or after large water changes.

After two to three days the level of the initial foam in the skimmer should rise to half way up the skimmer tube. Adjust the tap to achieve fine bubbles within the skimmer.

During normal operation it is recommended that the skimmer cup is emptied every 2-4 days and that during this operation the riser tube into the cup is wiped clean of any fatty deposits as build up of this waste product will greatly reduce the ability for the foam to climb the neck.

Ensure before removing the cup that the pumps are switched off.

Use of Skimmer with Ozone: ELOS skimmers are suitable for use with ozone and will automatically suck the gas through the venturi hose. A maximum volume of 50 mg/h per pump should be used with special manifolds available for multi pump units. Do not use excessive ozone, as it is dangerous and can cause severe headaches. Should the skimmer performance deteriorate check the ozoniser for blockage. Ensure that it is not possible for water to siphon through the ozoniser by installing the unit above the skimmer water level.

Maintenance of Skimmer: ELOS skimmer should need very little adjustment and maintenance once set correctly, however due to the high levels of calcium in marine aquariums and large volumes of air drawn in, it is common for deposits to accumulate requiring periodical cleaning. Regular introduction of a small amount of RO water into the inlet tap may help to prevent any build up.

VERY IMPORTANT - A build up of calcium, dust and salt will restrict or block the venturi inlet on the connecting pipework and reduce the skimming efficiency over time. This should be checked and carefully cleaned on a monthly basis with a toothpick or fine drill rotated between the fingertips.

General Maintenance of Aquarium: the aquarium should require little maintenance once established other than cleaning of the glass, emptying of the skimmer and replacement of evaporative loss however regular checks of all of the systems will prevent sudden problems.

The filter bag should be rinsed in aquarium water, (but not in the tank), once a week or as required to remove debris. Change it regularly to prevent incorease of PO4.

Trouble shooting and Hints:

1 - On new aquariums with new salt or after large water changes it is possible that excess production of bubbles is encountered at the skimmer, which do not burst and enter the aquarium.

This is common with some salts and is caused by a conditioning agent added to the salt to remove heavy metals. Once the aquarium becomes established with fish waste and food etc this aeration will disappear but may take up to 6 weeks to fully mature. Starting up the system with salt water from an existing aquarium will remove this problem but might not always be an option.

2 - All new aquariums go through a maturation cycle whilst established bacterial colonies develop on the filter media. Advice should be taken from your ELOS dealer as to how quickly livestock can be added to the system as some systems mature faster than others.

3 – All new tanks will go through algal or diatom blooms during their maturation, which will look unsightly. Removing the phosphates from the water by use of ELOS FILTRA P and FILTRA P Fast can reduce this problem.

5 – Remember that although this is a relatively small tank that it is fitted with a powerful skimmer and recirculation pump to produce exceptional results and like all marine aquariums it should not be expected to be totally silent.

Natural rotation of the recirculation pump or skimmer pump may cause the sump or pipework items to resonate in harmony with the vibration frequency and increase the perception of noise from the system. This can be reduced by placing rubber 'O' rings around the pump body or standing the base of the pump body on a piece of filter sponge.

Moving the pump or sump slightly from time to time may change the frequency of resonance and reduce any noise.

IMPORTANT

Do not try to move the aquarium with any water inside. This will void your warranty.

WARRANTY

ELOS offers a limited 2 years warranty on all manufactured aquariums. Our aquariums are guaranteed to be free of defects in materials or workmanship for 2 years from the purchase. The warranty is non transferable and is only available to the original purchaser who has completed the product registration and has maintained original receipt. Under this warranty ELOS will repair or replace, at its option, a product that under normal use is proven to be defective in materials or craftsmanship. For this warranty to be valid, any defective product must be returned by the original purchaser, freight prepaid, to ELOS, and allow ELOS a reasonable time to verify alleged defect by inspection. ELOS will not be responsible for any defect determined to be caused from misuse, abuse, modification, alteration, or attempted repair from anyone other than a certified ELOS technician. Under no circumstance will ELOS be held responsible for any damages caused by defective products or for incidental or consequential damages, or for loss incurred from manufacture, sale, use, or misuse of these products.

Product Registration

Product Description

Aquarium Model _____

Date Of Purchase _____

Purchased From _____

Serial number (1): _____

Unique code(2): _____

Customer Information

Name _____

Address _____

City State _____

Zip Code _____ Country _____

Phone Fax _____

E-Mail _____

Comments

IMPORTANT: This form must be received within thirty days of purchase date to be valid.

Mail or Fax Registration Card To:

ELOS srl,
via Torricelli 32,
37067 Valeggio sul Mincio
(VR) - ITALY

Fax: +39 (0)45 6370836
Mail to: info@eloseurope.com
Complete this form on line at: www.eloseurope.com

NOTE:

1) Serial number is written on supplied warranty card or is impressed on the bottom glass of your aquarium.
2) You can also obtain the "**Unique code**", registering your aquarium on the dedicated web page at: www.eloseurope.com
   You can also obtain it by sending a copy of this Product Registration Form via regular mail, email or fax to the address mentioned above.

IMPORTANT:

It is important to obtain the **Unique Code** in order to validate your warranty and obtain service to your aquarium during the warranty period. No warranty will be given in case the Product Registration Form is missing the valid Unique code. ONLY AQUARIUM WITH MATCHING **Serial - Unique Code** are ORIGINAL ELOS AQUARIUM.

DISTRUST ALL THE AQUARIUM WITHOUT A VALID MATCHING "SERIAL - CODE".
You can verify the matching serial at www.eloseurope.com